APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,143	04/15/2004	Hyukjun Oh	040105	2317

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EXAMINER
TRINH, TAN H

ART UNIT	PAPER NUMBER
2618	

NOTIFICATION DATE	DELIVERY MODE
07/18/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com
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PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/827,143	OH ET AL.
	Examiner	Art Unit	
	TAN TRINH	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>15 April 2007</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-29</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1,20-22,24,26 and 27</u> is/are rejected.

7) ☒ Claim(s) <u>2-19,23,25,28 and 29</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>15 April 2004</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☐ All   b) ☐ Some * c) ☐ None of:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____.

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)   4) ☐ Interview Summary (PTO-413)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   Paper No(s)/Mail Date. _____.

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)   5) ☐ Notice of Informal Patent Application

     Paper No(s)/Mail Date _____.   6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1.   The information disclosure statement (IDS) submitted on 09-26-2005, the information

disclosure statement has been considered by the examiner.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   Claims 1, 20-22, 24 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Oestreich (U.S. Pub. No. 2003/0003875) in view of Engstrom (U.S. Patent No. 6639934).

Regarding claims 1, 22 and 26-27, Oestreich teaches wireless device in a wireless

communication system (see fig. 3), comprising: a data processor operative to process received

data blocks for a plurality of data channels and to provide a status of each received data block

(see fig. 2 and 3, page 2, sections [0017-0020 and 0023-0024]). In this case, the base station and

mobile station contained the data processor. Wherein the plurality of data channels are used for a

data transmission and are power controlled together (see pages 3, sections [0025-0031]); and a

controller operative to determine whether each of the plurality of data channels is dormant or not

dormant (see page 3, sections [0029-0031 and 0036]). In this case, the data channel is dormant

when the channel's transmission pauses, and the data channel is not dormant when the data

channel is active. Adjust power for final signal quality (SIR) target for the plurality of data

channels based on status of received data blocks for data channels that are not dormant (see page

3, sections [0027, 0036 and 0039] and page 4, sections [0042-0045]), and use the final SIR target

for power control of the data transmission sent on the plurality of data channels (see page 4,

sections [0039 and 0047] and page 5, sections [0048-0049]). In this case, the final SIR target is

the sum of the SIR target it take into account of the fact that the signal/interference ratio (SIR),

the effect of the quality signal should be compensated for in an appropriate manner. But

Oestreich does not mention adjust final signal quality (SIR) target.

However, Engstrom teaches adjust final signal quality (SIR) target (see fig. 5A-B and

6A-B, SIR target adjustment, col. 5, lines 9-58).

Therefore, it would have been obvious to one of ordinary skill in the art at the time

invention was made to modify above teaching of Oestreich with Engstrom, in order to provide

transmission power control for use in a spread spectrum or CDMA mobile communications

system (see suggested by Engstrom on col. 4, lines 12-22).

Regarding claim 20, Oestreich teaches the controller is further operative to derive

transmit power control (TPC) commands based on the final SIR target and a received SIR for the

data transmission (see page 5, section [0049]), and wherein the TPC commands are used to

adjust transmit power for the data transmission sent on the plurality of data channels (see page 4,

sections [0043-0044 and 0047]).

Regarding claim 21, Oestreich teaches the wireless communication system is a Code

Division Multiple Access (CDMA) system, and wherein the plurality of data channels are

transport channels (see page 1, sections [0003-0004]).

Regarding claim 24, Oestreich teaches the means for determining whether each of the

plurality of data channels is dormant or not dormant (see page 3, sections [0029-0031 and 0036])

comprises means for detecting for activity on each of the plurality of data channels based on an

error detection code, received signaling information, received data block energy, or a

combination thereof (see page 2, section [0024], and page 4 section [0039]). In this case, the

detecting for activity can be radio block, spread code C and bit error rate (BER) or SIR.

Allowable Subject Matter

4.   Claims 2-19, 23, 25 and 28-29 are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the limitations of

the base claim and any intervening claims.

Reasons for allowance

5.   The following is an examiner's statement of reasons for allowance:

Regarding dependent claim 2, Oestreich teaches a controller operative to determine

whether each of the plurality of data channels is dormant or not dormant (see page 3, sections

[0029-0031 and 0036]), and Engstrom teaches adjust final signal quality (SIR) target (see fig.

5A-B and 6A-B, SIR target adjustment, col. 5, lines 9-58). However, Oestreich or Engstrom

alone or in combination with other prior art of record, fail to disclose; the controller is further

operative to maintain an inactivity timer and a dormant flag for each of the plurality of data

channels, the inactivity timer indicating an amount of elapsed time since activity was last

detected on the data channel, and the dormant flag indicating whether the data channel is

dormant or not dormant as specified in dependent claim 2.

Regarding dependent claims 3, 23 and 28 , Oestreich teaches a controller operative to

determine whether each of the plurality of data channels is dormant or not dormant (see page 3,

sections [0029-0031 and 0036]), and Engstrom teaches adjust final signal quality (SIR) target

(see fig. 5A-B and 6A-B, SIR target adjustment, col. 5, lines 9-58). However, Oestreich or

Engstrom alone or in combination with other prior art of record, fail to disclose; the controller is

operative to, for each of the plurality of data channels, determine an amount of time elapsed

since activity was last detected on the data channel, declare the data channel to be dormant if the

amount of elapsed time since last activity is greater than or equal to a predetermined time

threshold, and declare the data channel to be not dormant if the amount of elapsed time since last

activity is less than the predetermined time threshold as specified in dependent claims 3, 23 and

28.

Regarding dependent claims 7, 25 and 29, Oestreich teaches a controller operative to

determine whether each of the plurality of data channels is dormant or not dormant (see page 3,

sections [0029-0031 and 0036]), and Engstrom teaches adjust final signal quality (SIR) target

(see fig. 5A-B and 6A-B, SIR target adjustment, col. 5, lines 9-58). However, Oestreich or

Engstrom alone or in combination with other prior art of record, fail to disclose; the controller is operative to adjust an SIR target for each data channel that is not dormant based on status of received data blocks for the data channel, wherein one SIR target is maintained for each data channel that is not dormant, and derive the final SIR target based on SIR targets for the data channels that are not dormant as specified in dependent claims 7, 25 and 29.

Regarding dependent claim 12, Oestreich teaches a controller operative to determine whether each of the plurality of data channels is dormant or not dormant (see page 3, sections [0029-0031 and 0036]), and Engstrom teaches adjust final signal quality (SIR) target (see fig. 5A-B and 6A-B, SIR target adjustment, col. 5, lines 9-58). However, Oestreich or Engstrom alone or in combination with other prior art of record, fail to disclose the wireless device of claim 1, wherein to adjust the final SIR target for the plurality of data channels, the controller is operative to, for each update interval, increase the final SIR target if at least one erased block is received in the update interval, an erased block being a received data block that is deemed to have been transmitted but decoded in error, and decrease the final SIR target if good blocks and no erased blocks are received in the update interval, a good block being a received data block that is decoded correctly as specified in dependent claim 12.

Regarding dependent claim 14, Oestreich teaches a controller operative to determine whether each of the plurality of data channels is dormant or not dormant (see page 3, sections [0029-0031 and 0036]), and Engstrom teaches adjust final signal quality (SIR) target (see fig. 5A-B and 6A-B, SIR target adjustment, col. 5, lines 9-58). However, Oestreich or Engstrom

alone or in combination with other prior art of record, fail to disclose the wireless device of claim

1, wherein the controller is operative to use a first up step size if an erased block is received on a

data channel within a predetermined period after the data channel has transitioned from dormant

to not dormant and to use a second up step size if an erased block is received on the data channel

at other time, an erased block being a received data block that is deemed to have been

transmitted but decoded in error, and wherein the first up step size is larger than the second up

step size as specified in dependent claim 14.

Regarding dependent claim 16, Oestreich teaches a controller operative to determine

whether each of the plurality of data channels is dormant or not dormant (see page 3, sections

[0029-0031 and 0036]), and Engstrom teaches adjust final signal quality (SIR) target (see fig.

5A-B and 6A-B, SIR target adjustment, col. 5, lines 9-58). However, Oestreich or Engstrom

alone or in combination with other prior art of record, fail to disclose the wireless device of claim

1, wherein the controller is further operative to, if a data channel is determined to have become

dormant in a current update interval, save a last SIR target value for the data channel, the last

SIR target value being an SIR target value usable for the data channel in the current update

interval as specified in dependent claim 16.

Regarding dependent claim 17, Oestreich teaches a controller operative to determine

whether each of the plurality of data channels is dormant or not dormant (see page 3, sections

[0029-0031 and 0036]), and Engstrom teaches adjust final signal quality (SIR) target (see fig.

5A-B and 6A-B, SIR target adjustment, col. 5, lines 9-58). However, Oestreich or Engstrom

alone or in combination with other prior art of record, fail to disclose the wireless device of claim 1, wherein the controller is further operative to, if activity is detected on a data channel that was dormant, determine an initial SIR target value for the data channel, and adjust the final SIR target further based on the initial SIR target value for the data channel as specified in dependent claim 17.

Conclusion

6.   **Any response to this action should be mailed to:**

> Commissioner of Patents and Trademarks
> Washington, D.C. 20231

or faxed to:

(571) 273-8300, (for Technology Center 2600 only)

Hand-delivered responses should be brought to the Customer Service Window (now located at

*the **Randolph Building, 401 Dulany Street, Alexandria, VA 22314).***

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (571) 272-7888. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

    If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor, Anderson, Matthew D., can be reached at (571) 272-4177.

    The fax phone number for the organization where this application or proceeding is assigned is **(571) 273-8300**.
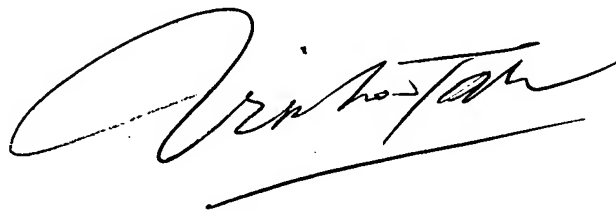
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

8.   Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tan H. Trinh
Division 2618
July 7, 2007

PATENT EXAMINER
TRINH,TAN